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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,074	09/27/2000	Christian Lauble	10537/68	1448

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KENYON & KENYON
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/485,074	Applicant(s) LAUBLE ET AL. <i>SW</i>
Examiner Melody M. Burch	Art Unit 3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-26 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 and 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 31. 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/8/03 has been entered.

Election/Restrictions

2. Applicant's election with traverse of Species I in Paper No. 30 is acknowledged. The traversal is on the ground(s) that the claims fully comply with the unity of invention requirement that there is a technical relationship among the several claims. This is not found persuasive because species I is directed to an arrangement having a cylindrical sleeve with stop and spring elements, species II is directed to an arrangement having an undulating sleeve with stop and spring elements and the troughs of the undulating sleeve also serving as stop elements. Also quadrant IV of species II includes a thin rubber layer.

The requirement is still deemed proper and is therefore made FINAL.

3. Claims 13, 14, 15, 16, 23, 24, 25, and 26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 30.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of a plurality of stop elements between each adjacent pair of spring elements as first claimed in claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that only one stop element is shown between each adjacent pair of stop elements.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to because figure 1a or 1b fails to show the location of the cross-sectional cut corresponding to figures 4 and 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: The last paragraph on pg. 10 of the substitute specification is confusing. It is unclear how figures 1a to 1d can be combined with figures 2-5 in any desired combination when figure 1a has a sleeve 10 and figure 5 has a sleeve 25, for example.

Appropriate correction is required.

Claim Objections

7. Claims 9, 10, 11, and 12 are objected to because of the following informalities: the phrase "than between each stop element" first claimed in line 4 from the bottom of claim 9 should be changed to --than between an area (or gap) between each stop element--. Claims 10 and 12 are objected to due to their dependency from one of claims 9 and 11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9, 10, 11, 12, 18, 19, 20, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5352157 to Ochs et al. in view of JP-8312703.

Re: claims 9 and 21. Ochs et al. show in figure 1 a vibration damper for a rotatable tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve or band shown between elements 2 and 3 arranged in the shaft 2 and rotatable with the shaft, the sleeve defining a radial and circumferential direction, a mass body 1 mounted concentrically in the sleeve, a plurality of rubber-like spring elements 3 for mounting the mass body to the sleeve, and a plurality of flexible

Art Unit: 3683

stop elements 4,8 disposed circumferentially between *an* adjacent pair of spring elements 3,3 and disposed between the mass body and the sleeve to define a discrete space to limit a vibration travel of the mass body at least in the radial direction, wherein a contact surface of each stop element extends over a larger circumferential angle than the spring elements and than an area between each stop element and each adjacent rubber-like spring element as shown, such that each stop element occupies a large portion of a space between the mass body, the spring elements and the sleeve as shown.

Ochs et al. do not show a plurality of flexible stop elements being disposed circumferentially between *each* adjacent pair of spring elements since only one pair of spring elements is shown.

JP '703 teaches in figure 1 the use of multiple pairs of spring elements such that a flexible stop means 17,19,21,23,25 is disposed circumferentially between each adjacent pair of spring elements 16,18,20,22,24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the spring elements and the flexible stop elements of Ochs et al. to have included multiple pairs of spring elements such that a plurality of flexible stop elements are disposed circumferentially between each adjacent pair of spring elements, in view of the teachings of JP '703, in order to provide a means of increasing the vibration damping capacity of the apparatus.

Also, Ochs et al. state that the spring elements are rubber-like but do not specifically disclose that the rubber-like elements are actually rubber.

Art Unit: 3683

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the rubber-like spring elements to have actually been made of rubber in order to provide a resilient means between the mass body and the sleeve since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Examiner further notes that Applicant has failed to provide an explanation of criticality associated with the spring elements being made specifically of rubber.

Re: claims 10, 12, and 22. Ochs et al., as modified, teach in lines 4-5 from the top of the abstract and in line 5 from the bottom of the abstract the limitation wherein the flexible stop elements (second and third spring elements) include rubber.

Re: claims 11, 18, and 20. Ochs et al. show in figure 1 a vibration damper for a rotatable tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve or band shown between elements 2 and 3 arranged in the shaft 2 and rotatable with the shaft, the sleeve defining a radial and circumferential direction, a mass body 1 mounted concentrically in the sleeve, a plurality of rubber-like spring elements 3 for mounting the mass body to the sleeve, and wherein at least one of the mass body and the sleeve (particularly, the sleeve which is connected to the propeller shaft) at least partially form a stop element 8 configured to limit a vibration travel of the mass body in at least the radial direction, wherein the stop element defines discrete space and wherein a contact surface of the stop element (the contact surface of element 8 is shown abutting the sleeve) extends over a larger circumferential angle

Art Unit: 3683

than the spring elements and than an area between each stop element and each adjacent rubber spring element.

Ochs et al. do not show the limitation of a plurality of stop elements formed in circumferentially opposite regions between the spring elements, as best understood from Applicant's drawings. Examiner has interpreted the limitation to mean a plurality of adjacent pairs of spring elements with a stop element in between each adjacent pair of spring elements. Ochs et al. only show a stop element between one pair of spring elements.

JP '703 teaches in figure 1 the use of multiple pairs of spring elements such that a flexible stop means 17,19,21,23,25 is disposed circumferentially between each adjacent pair of spring elements 16,18,20,22,24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the spring elements and the flexible stop elements of Ochs et al. to have included multiple pairs of spring elements such that a plurality of flexible stop elements are disposed circumferentially between each adjacent pair of spring elements, in view of the teachings of JP '703, in order to provide a means of increasing the vibration damping capacity of the apparatus.

Also, Ochs et al. state that the spring elements are rubber-like but do not specifically disclose that the rubber-like elements are actually rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the rubber-like spring elements to have actually been made of rubber in order to provide a resilient means between the mass body and

Art Unit: 3683

the sleeve since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Examiner further notes that Applicant has failed to provide an explanation of criticality associated with the spring elements being made specifically of rubber.

Re: claim 19. Ochs et al. show in figure 1 a vibration damper for a rotatable tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve or band shown between elements 2 and 3 arranged in the shaft 2 and rotatable with the shaft, the sleeve defining a radial and circumferential direction, a mass body 1 mounted concentrically in the sleeve, a plurality of rubber-like spring elements 3 for mounting the mass body to the sleeve, and wherein the mass body at least partially forms, a stop element 4,10 configured to limit a vibration travel of the mass body in at least the radial direction, wherein the stop element defines discrete space and wherein a contact or bottom surface of the stop element extends over a larger circumferential angle than the spring elements and than an area between each stop element and each adjacent rubber spring element. (Applicant states in lines 30-37 on page 5 of the specification that the stop elements extending over a larger circumferential angle than the spring elements results in the vibration travel in the central compression direction of the spring element being only insignificantly greater than in the central compression direction of the stop element.)

Ochs et al. do not show the limitation of a plurality of stop elements formed in circumferentially opposite regions between the spring elements, as best understood

Art Unit: 3683

from Applicant's drawings. Examiner has interpreted the limitation to mean a plurality of adjacent pairs of spring elements with a stop element in between each adjacent pair of spring elements. Ochs et al. only show a stop element between one pair of spring elements.

JP '703 teaches in figure 1 the use of multiple pairs of spring elements such that a flexible stop means 17,19,21,23,25 is disposed circumferentially between each adjacent pair of spring elements 16,18,20,22,24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the spring elements and the flexible stop elements of Ochs et al. to have included multiple pairs of spring elements such that a plurality of flexible stop elements are disposed circumferentially between each adjacent pair of spring elements, in view of the teachings of JP '703, in order to provide a means of increasing the vibration damping capacity of the apparatus.

Also, Ochs et al. state that the spring elements are rubber-like but do not specifically disclose that the rubber-like elements are actually rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the rubber-like spring elements to have actually been made of rubber in order to provide a resilient means between the mass body and the sleeve since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Examiner further notes that

Art Unit: 3683

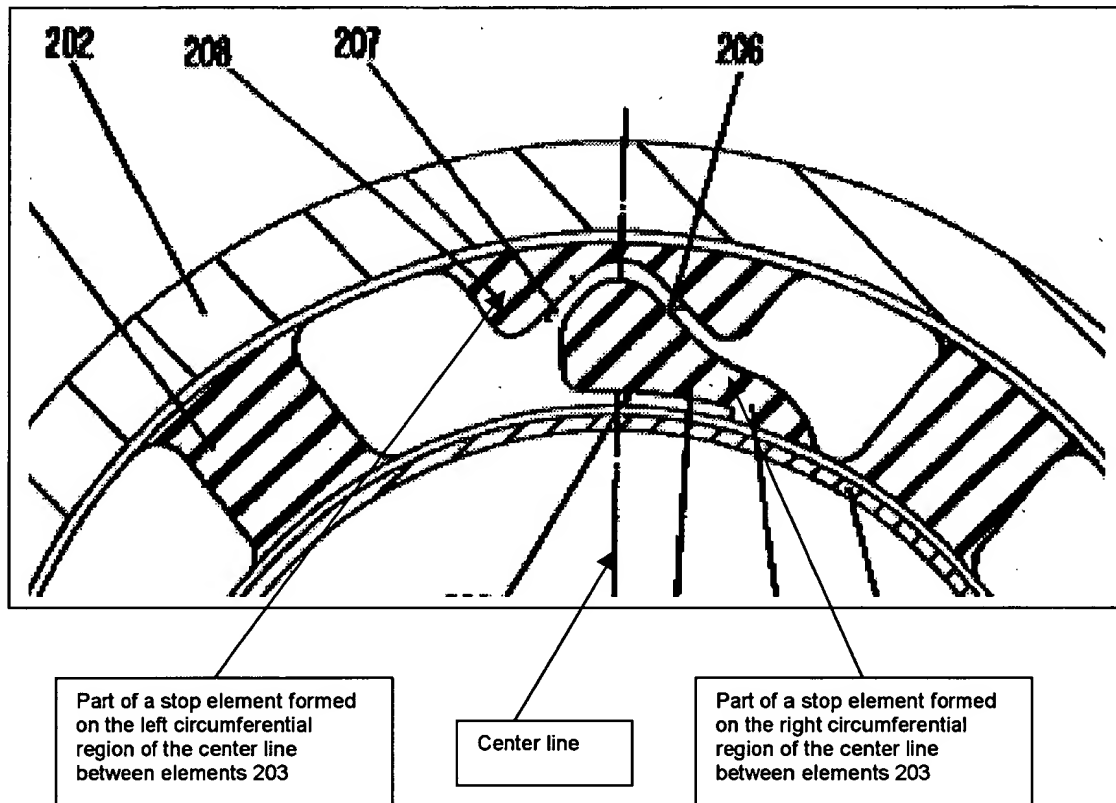
Applicant has failed to provide an explanation of criticality associated with the spring elements being made specifically of rubber.

10. Claims 11, 12, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5352157 to Ochs et al.

Re: claims 11 and 18. Ochs et al. show in figure 3 a vibration damper for a rotatable tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve or band shown between elements 202 and 203 arranged in the shaft 202 and rotatable with the shaft, the sleeve defining a radial and circumferential direction, a mass body 201 mounted concentrically in the sleeve, a plurality of rubber-like spring elements 203 for mounting the mass body to the sleeve, and wherein at least one of the mass body and the sleeve (particularly, both the mass body and the sleeve) at least partially form, in circumferentially opposite regions between the rubber-like spring elements, a plurality of stop elements 208,210 (as claimed but not as shown by Applicant – see drawing objection above) configured to limit a vibration travel of the mass body in at least the radial direction (mass body 201 forms a stop element 210,204 in the area below the lead line of element 210 which is on a circumferentially opposite side of the center line dividing the area between the spring elements 203 from the stop element 208 which is partially formed from the sleeve in the area above the lead line associated with number 208), wherein the stop elements define discrete spaces and wherein a contact surface of each stop element (the contact surface of element 208 is shown abutting the sleeve and the contact surface of element 204,210 is shown at the bottom of the element in the area of the lead line of numbers

Art Unit: 3683

209 and 210) extends over a larger circumferential angle than the spring elements and than an area between each stop element and each adjacent rubber spring element.



Ochs et al. state that the spring elements are rubber-like but do not specifically disclose that the rubber-like elements are actually rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the rubber-like spring elements to have actually been made of rubber in order to provide a resilient means between the mass body and the sleeve since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Examiner further notes that

Art Unit: 3683

Applicant has failed to provide an explanation of criticality associated with the spring elements being made specifically of rubber.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5374219 to Kohara et al.

Kohara et al. show in figures 1 and 3 a vibration damper for a rotatable tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a rotatable propeller shaft 13A, the propeller shaft defining a radial and a circumferential direction, a mass body 14A arranged concentrically in the propeller shaft, a plurality of rubber spring elements 23A for mounting the mass body to the propeller shaft, and a plurality of stop elements 16A configured to limit a vibration travel of the mass body at least in the radial direction, the stop elements being disposed between the mass body and the propeller shaft and circumferentially between each adjacent pair of rubber spring elements so as to define a discrete space, but do not include the specific limitation of the stop elements including at least one of metal or rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the stop elements of Kohara et al. to have included at least one of metal or rubber to provide a stop means with adequate strength and/or durability depending on the application since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125, USPQ 416

Art Unit: 3683

R s p o n s t o A r g u m n t s

12. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

C o n c l u s i o n

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

 Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb
mmb

February 5, 2004

Melody M. Burch 2/5/04